WISCONSIN ENDANGERED RESOURCES REPORT #125
STATUS OF THE AMERICAN MARTEN IN WISCONSIN
PERFORMANCE REPORT, 1 JULY 2001 THROUGH 30 JUNE 2002
By Adrian P. Wydeven, Jane E. Wiedenhoeft, & James E. Ashbrenner

SUMMARY

A total of 19 American marten were detected along 224.3 miles of survey; all marten tracks occurred along 168.2 miles surveyed in the Marten Restoration Areas. Marten tracks included 14 along 123 miles of transects in northern Forest County and 5 along 45.2 miles near Clam Lake in northwest Wisconsin. Rate of observation was about the same in both locations; 11.3 marten/100 miles in northeast Wisconsin and 11.1/100 miles in northwest Wisconsin. Marten abundance seemed to be down from recent years, and most martens continue to exist in the refuge areas provided in northwest and northeast Wisconsin. No marten committee meetings were held during the study period.

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Job 106.2.1 Monitor Population
Job 106.2.2 Determine Recovery Levels
Job 106.2.3 Enhance Population
Job 106.2.4 Communications

Background: American marten (*Martes americana*), also known as pine marten, were listed as state endangered in 1972. Between 1975-1983, 172 martens were released in northern Forest County in the Nicolet National Forest of northeast Wisconsin. Between 1987-1990, 139 marten were reintroduced into the Clam Lake area of Ashland County in the Chequamegon National Forest in northwest Wisconsin. Marten were released into Fisher Management Units, where fisher (*Martes pennanti*) were reintroduced in the 1950's and the 1960's. These management units were closed to all terrestrial trapping of fur bearers and have been redesignated as Marten Restoration Areas (MRA). The MRA's cover 344 mi^2 in the Clam Lake area of northwest Wisconsin and 188 mi^2 in northeast Wisconsin. Standardized track surveys were initiated in 1987 in the Nicolet National Forest, and in 1991 in the Chequamegon National Forest.

A recovery plan was developed for the American (pine) marten in Wisconsin in 1986. The 4 jobs listed in this report represent main strategies for recovering marten populations in Wisconsin.

JOB 106.2.1 MONITOR POPULATION

Three routes of about 25-30 miles each were established in the two MRA's, and two additional routes were run periodically in northeast Wisconsin (Figures 1 & 2). Routes were followed slowly with four-wheel drive vehicles >8 and <24 hours after a fresh snowfall (Ashbrenner 1994). Tracks of individual marten, other carnivores and porcupines were recorded along each route.

Results and Discussion

Chequamegon marten surveys (northwest Wisconsin) were run in January and February with snow cover of 7.5 to 10 inches (Table 1). Five marten were detected along 45.2 miles of survey. The marten track observation rate was 11.1 marten per 100 miles surveyed, which was the lowest rate detected since winter 1997-1998, and was similar to the Nicolet survey routes.

Nicolet surveys were run in December and January with 0.5 to 3.0 inches of snow cover (Table 2). Fourteen marten were detected along 123.4 miles survey in the Nicolet MRA's. The track observation rate was 11.3 martens/100 miles surveyed, and was also similar to the rate observed in 1997-1998. No martens were detected along 43.7 miles of survey in northeast Wisconsin outside the MRA.

The ratio of marten to fisher was 1 marten/4.4 fisher in the Chequamegon MRA, and 1 marten/6.0 fisher in the Nicolet. In the past, this ratio has been close to 1 marten/3 fisher. The decline of marten on this index and the low rate of observations per 100 miles, suggest that the marten population may have declined.

Based on analysis by J. Woodford (in preparation) core marten range continues to center around the two release areas with some slow expansion (Figure 3). Reports from state wildlife biologists indicate small populations may also exist in Douglas and Menominee counties.

Other carnivores detected included coyote, bobcat, fox, wolf, dog, bear and otter. Fox appeared most abundant in the Chequamegon, and coyote were most abundant in the Nicolet.

JOB 106.2.2 DETERMINE RECOVERY LEVELS

No meetings were held of the Marten Committee during the study period, but informal discussions were held promoting marten research. Jonathan Gilbert continued conducting research with GLIFWC on marten populations in the Clam Lake area including home range, habitat use and mortality assessment. John Wright of the U.S. Forest Service examined physiological parameters of marten and landscape interactions of martens in northwest Wisconsin.

JOB 106.2.3 ENHANCE POPULATION

Ongoing research and monitoring are continuing to examine the viability of reintroduced populations and the potential for additional enhancement by additional reintroductions.

JOB 106.2.4 COMMUNICATION

American marten surveys were published in the Wisconsin Wildlife Surveys (Wydeven et al 2002), and marten observations were reported in Wisconsin Wildlife Surveys under "Rare Mammal Observations" (Wydeven and Wiedenhoeft 2002). Discussion of marten ecology and status was included with several talks including the following: talk to 15 volunteer trackers in Wascott 3 November 2001; talk to 60 volunteer trackers at Treehaven 10 November 2001; track training for 67 wildlife management personnel at Cable 16 January 2002; and training for 12 naturalists at Environmental Educators conference at Cable on 21 March 2002.

Acknowledgement

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Table 1. Mammal track observations along marten survey routes near Clam Lake in the Chequamegon National Forest, winter 2001-2002.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
2/11/02	2	10.0"	31.4	2	17	6	4	1 Dog 9 Fox 5 Wolf 1 Porcupine
1/17/02	3	7.5"	13.8	3	5	0	1	7 Fox 8 Wolf
Totals			**45.2**	**5**	**22**	**6**	**5**	**1 Dog** **16 Fox** **13 Wolf** **1 Porcupine**
Rate per 100 mi. (2-3)				11.1	48.7	13.3	11.1	2.2 Dog 35.4 Fox 28.8 Wolf 2.2 Porcupine
2000-2001			94.4 1 & 3 only	19.1 (10.2)	59.6	11.7	6.4	6.4 Mink 1.1 Badger 8.5 Otter 19.1 Fox 21.3 Wolf 1.1 Porcupine
1999-2000			58.3	20.6	70.3	41.2	12.0	3.4 Mink 18.9 Otter 5.1 Dog 22.3 Fox 8.6 Wolf 3.4 Porcupine
1998-1999	None							
1997-1998			72.6	9.7	41.4	17.2	1.4	2.8 Dog 30.4 Fox 9.7 Wolf 1.4 Porcupine
1996-1997			76.2	17.1	56.4	10.5	2.6	1.4 Otter 23.2 Fox 7.1 Wolf 2.8 Porcupine

Table 2. Mammal track observations along marten survey routes in the Nicolet National Forest, winter 2001-2002.

Date	Route No.	Snow Depth (in)	Miles Run	Number of Tracks Observed				
				Marten	Fisher	Coyote	Bobcat	Other
12/20/01	1	0.5"	29.1	5	20	27	6	3 Dog 3 Fox 1 Porcupine
12/20/01	2	0.5"	21.3	6	16	14	3	2 Fox 1 Porcupine
1/18/02	2	3"	19.1	0	1	13	0	1 Dog 1 Fox 2 Porcupine
1/7/02	3	2"	28.8	3	13	14	4	3 Otter 4 Fox 2 Porcupine
1/18/02	3	3"	25.1	0	14	27	2	3 Fox
12/26/01	4	2"	9.0	0	2	3	1	1 Bear 1 Porcupine
12/27/01	4	3"	28.7	0	8	13	5	2 Fox 3 Porcupine
1/13/02	5	1"	18.0	0	10	17	7	1 Otter 1 Fox
Totals			**179.1**	**14**	**84**	**128**	**28**	**4 Otter** **4 Dog** **16 Fox** **1 Bear** **10 Porcupine**
Rate per 100 mi (1-3)			(123.4)	11.3	51.9	77.0	12.2	2.4 Otter 3.2 Dog 10.5 Fox 4.9 Porcupine
2000-2001			(79.1)	25.3	58.2	49.3	8.8	1.3 Otter 7.6 Fox 3.8 Porcupine
1999-2000			(80.9)	12.4	23.5	32.1	2.5	4.9 Otter 1.2 Dog 3.7 Fox 3.7 Porcupine
1998-1999			(79.4)	23.9	27.7	27.7	5.0	6.3 Otter 3.8 Fox

Table 2. cont.

1997-1998	(84.1)	11.9	26.2	41.6	2.4	3.6 Otter 2.4 Fox 3.6 Porcupine
1996-1997	(76.2)	13.8	37.9	36.8	5.7	2.3 Otter 4.6 Fox 2.3 Porcupine